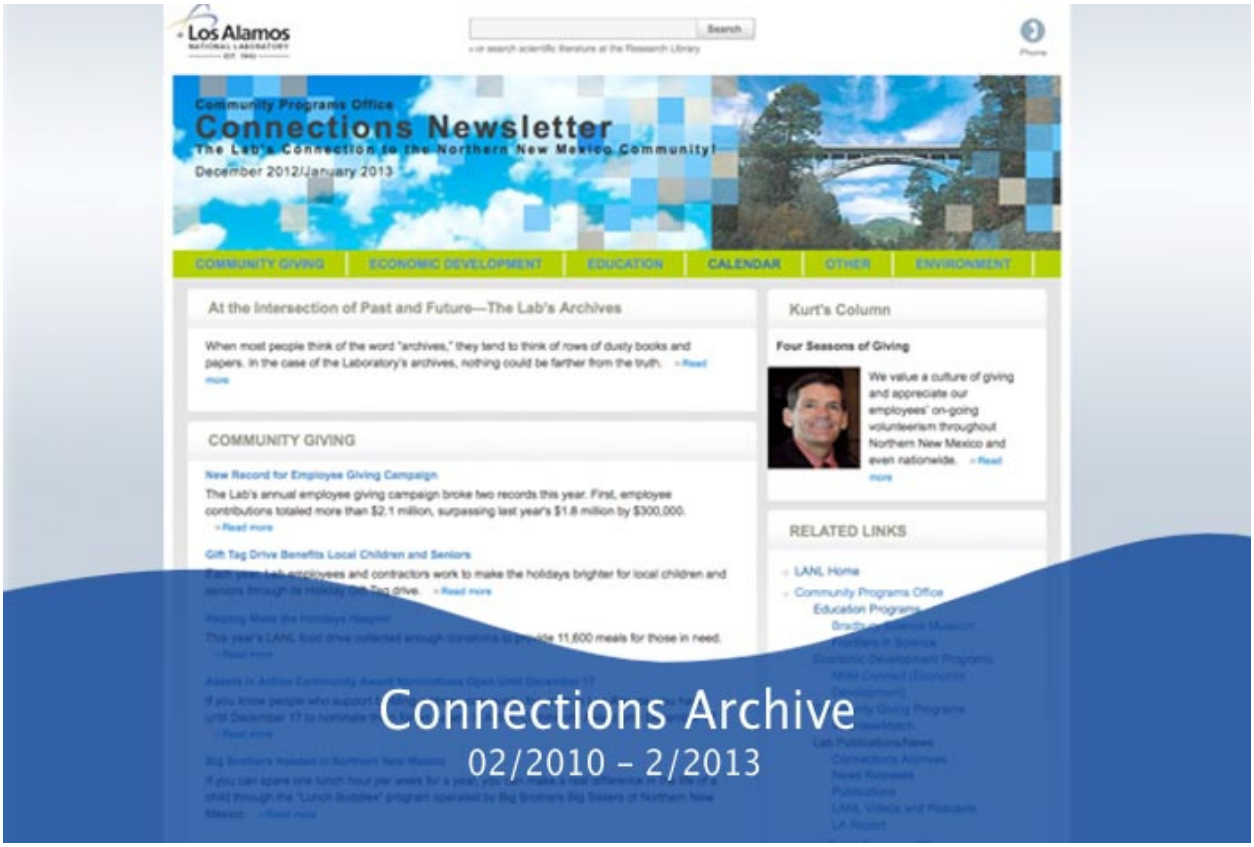
In Other News

August 1, 2012



Los Alamos Expertise Integral to Nuclear Energy Innovation Hub

In June 2010, scientists from the Lab were selected by the U.S. Department of Energy (DOE) to participate in a Nuclear Innovation Hub effort to create a computer-simulated reactor that could lead to a new generation of safer, longer-lasting, and less-expensive nuclear reactors for growing energy needs.

Known as the Consortium for Advanced Simulation of Light Water Reactors (CASL) and led by Oak Ridge National Laboratory (ORNL), the five-year, $122 million project includes partners from universities, industry, and other national labs. Its charter is to use the advanced capabilities of the world's most powerful computers to make significant advances in nuclear reactor design and engineering. The ultimate goal of the project is to build an integrated, predictive simulation tool for industry called the Virtual Environment for Reactor Analysis or "VERA" for short.

Scientists from the Lab's Computer, Computational, and Statistical Sciences; Materials Science and Technology; and Theoretical Divisions are helping to work through issues related to uncertainty quantification, radiation transport, computational fluid dynamics, high-performance computing, computer science, and integrated code development. The Lab is also the lead for the project's materials science and thermal hydraulics needs as it works with the other partners and DOE.

Recently, the Lab has made advances in understanding some of the forces and impacts involved in coolant flow that will be incorporated into simulations to better understand the roles they play. Progress has also been made in understanding deposits that build up on fuel rods, called CRUD (short for Chalk River Unidentified Deposit), that can lead to problems such as corrosion and decreased power production.

In addition to ORNL, LANL, and the Massachusetts Institute of Technology, the members of the CASL team are the Electric Power Research Institute, Idaho National Laboratory, North Carolina State University, Sandia National Laboratories, Tennessee Valley Authority, University of Michigan, and Westinghouse Electric Company.

Through the efforts of this multi-disciplinary, multi-sector team, the U.S. is on the path toward developing the next generation of safer, longer-lasting, and less-expensive nuclear reactors.

To see the original press release, go to http://energy.gov/articles/deputy-secretary-poneman-announces-team-led-oak-ridge-national-lab-selected-receive-122.

LANL Now on Facebook

The Lab is now on Facebook at http://www.facebook.com/LosAlamosNationalLab. Through this resource, you can keep up with changing news or learn about other places to get science information. There is currently a photo contest posted, and in coming weeks there will be lots of information on the upcoming Mars rover landing (see the related article).

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